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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Steven Victor Jones

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EXAMINER

REESE, DAVID C

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/511,071	Applicant(s) JONES, STEVEN VICTOR	
	Examiner David C. Reese	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,7-10,21-28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7-10, 21-28, and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The indicated allowability of claims 21-28 and 30 are withdrawn in view of the newly discovered reference(s) to Huck, US-2,030,169, in view of Palm, US-5,183,357. Rejections based on the newly cited reference(s) follow.

THIS NON-FINAL ACTION IS RESPONSIVE TO THE AMENDMENT FILED 3/26/2008.

- Claims 4, 6, 11-20, and 29 were canceled.
- Claim 1 was amended.
- Claims 1-3, 5, 7-10, 21-28, and 30 are pending.

Claim Objections

[1] Claim 1 is objected to because of the following informalities: “which slots” is grammatically incorrect. Consider changing to "said slots terminating". Appropriate correction is required.

[2] Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In the instant claim, it is stated of a reduced diameter section adjacent said shoulder. Said reduced diameter section, however, has already been identified and claimed by depending independent claim 1 as "the first portion". Appropriate correction is required.

[3] Claims 3 and 5 recite the limitation "said plurality of slots" in the instant claim. There is insufficient antecedent basis for this limitation in the claim or depending one therefrom. More specifically, in claim 1, it is stated of “three slots” and “at least one of said three slots”, but “plurality of slots” is never articulated.

Claim Rejections - 35 USC § 112

[4] Applicant has addressed all rejections under 35 USC § 112 to the Claims in the amendment filed 3/26/2008. Accordingly, the Examiner has withdrawn the 35 USC § 112 rejections.

Claim Rejections - 35 USC § 103

[5] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[6] Claims 1-3, 5, 7-10, 21-28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huck, US-2,030,169, in view of Palm, US-5,183,357.

Although the invention is not identically disclosed or described as set forth 35 U.S.C. 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a designer having ordinary skill in the art to which said subject matter pertains, the invention is not patentable.

As for Claim 1, Huck teaches of a blind rivet assembly for setting in relatively soft material, said rivet assembly comprising:

an elongate tubular body (10) having a shank about a shank axis and preformed head (11) at first end thereof and an expandable portion (12) at opposite end of the shank remote from the head,

a mandrel (14) having a substantially smooth stem extending through and coaxial with said tubular body (10), said stem having a first portion having a first generally constant diameter, and a second portion having a second generally constant diameter greater than the first diameter, said mandrel further having a head (14) and a breakneck (at 24) adjacent the second section and a maximum external diameter greater than the internal diameter of the body (14), said head (14) having a shoulder (15) portion, said shoulder portion being perpendicular to the stem adjacent the first portion.

The difference between the claim and Huck is that Huck does not expressly state that of said expandable portion defining three slots, which slots terminate remote from said first end, said slots defining a triangular aperture having substantially flat sides and wherein at least one of said three slots increases in width in a radial direction as it extends from tubular body outer surface to inner surface of said shank, and wherein the substantially flat sides tangentially engage the mandrel. Palm discloses a Rivet fastener similar to that of Huck including that of a mandrel with stem, head, as well as a tubular body with a head and expandable portion. In addition, Palm further teaches of said expandable portion defining three slots (figs. 9 or 14 of Palm), which slots terminate remote from said first end, said slots defining a triangular aperture having substantially flat sides and wherein at least one of said three slots increases in width in a radial direction as it extends from tubular body outer surface to inner surface of said shank, and wherein the substantially flat sides tangentially engage the mandrel (figs. 9 or 14 of Palm). It would have been obvious to one of ordinary skill in the art, having the disclosures of Huck and Palm before him at the time the invention was made, to modify the expandable portion of the tubular body of Huck to include three slots [with the slot/tubular body structure as articulated above], as in Palm.

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One would have been motivated to make such a combination because such a modification to the expandable portion of the tubular body allows for a very good rivet connection as well as reducing the force needed to generate this rivet connection, as well as equal distribution of the expandable portion outward against a component, as taught by Palm (see summary of the invention). Further, it would have been obvious to a person of ordinary skill in the art to have modified the expandable portion of the tubular body as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because the slots as claimed has the properties predicted by the prior art of Palm, it would have been obvious to make the modification to the expandable portion of Huck in order to gain the commonly understood benefits and applications of such an adaptation and/or modification including that of increasing the presence of the rivet connection and making it easier for the user when using said rivet connection unit (due to the requirement of less force).

Re: Claim 2, Palm teaches wherein the substantially flat sides are convex (see figs. 9 and 14).

Re: Claim 3, Palm teaches wherein each of said plurality of slots are equally spaced about the circumference of said tubular body so that the angular displacement between adjacent slots about the shank axis is constant (see figs. 9 and 14).

Re: claims 5 and 25, Palm teaches of the slots having a radially inclined axial inner end so it is longer adjacent said inner surface than said outer surface of tubular body (fig. 5).

Re: claims 7-8 and 27-28, Huck discloses wherein the wall thickness and external diameter of said tubular body (10) are constant along axial length of body (10).

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Re: claims 9 and 29, Huck discloses wherein said mandrel stem (14) has a reduced diameter section adjacent said shoulder (15), said reduced diameter section (15) having a circular cross-section.

Re: claims 10 and 30, Huck discloses wherein said maximum diameter of the mandrel head (14) is equal to the diameter of said tubular body (10).

As for claim 21, Huck as modified by Palm teach of a blind rivet assembly for setting in relatively soft material, said rivet assembly comprising:

an elongate tubular body (10) disposed about a body axis and a head (11) at a first end thereof and an expandable portion (12) at an opposed end of the body remote from the head and said expandable portion defining a plurality of slots (in view of Palm), said slots terminating remote from said first end, said slots defining a triangular aperture having substantially flat sides; and

a mandrel (14) having a substantially smooth stem with a break-neck portion (18), said stem extending through and co-axial with said tubular body (10), said mandrel further having a head (14) having a maximum external diameter greater than the internal diameter of the body (10), said head having a shoulder portion engagement surface (15), said shoulder portion engagement surface (15) being perpendicular to the stem,

wherein at least one of said plurality of slots increases in width in a radial direction as it extends from an outer surface of the tubular body to an inner surface of said shank (in view of Palm), and wherein the substantially flat sides tangentially engage the mandrel (in view of Palm), said mandrel stem having a reduced diameter section adjacent said

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shoulder engagement surface (15), said reduced diameter section having a generally constant circular cross-section.

Re: claim 24, Palm teaches wherein the flat sides are planar (Fig 9 and 14).

Re: claim 26, Palm teaches wherein the opposed end defines a flat bearing surface engaged with the shoulder portion engagement surface.

Conclusion

[7] THIS ACTION IS NON-FINAL.

[8] Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Reese whose telephone number is (571) 272-7082. The examiner can normally be reached on 7:30 am-6:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Victor Batson can be reached at (571) 272-6987. The fax number for the organization where this application or proceeding is assigned is the following: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Reese

/D. C. R./
Examiner, Art Unit 3677

/Robert J. Sandy/
Primary Examiner, Art Unit 3677